

ABSTRACT

Title of Thesis: UNDERSTANDING LOW SOCIAL ACCEPTANCE IN
ADOLESCENCE: THE ROLES OF SOCIAL
BEHAVIOR AND REPRESENTATIONS OF PEERS

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The goal of this study was to examine whether social behavior and peer representations would be linked to the extent to which adolescents were socially accepted. Findings indicated that prosocial behavior was positively associated with acceptance whereas aggressive, disruptive, and shy behaviors were negatively associated with acceptance. Results also suggested gender moderated the link between shy behavior and acceptance, such that shy boys were significantly less accepted than shy girls. In contrast, gender did not moderate the links between prosocial, disruptive, and aggressive behavior and acceptance. Although peer representations were negatively linked to acceptance, gender did not significantly moderate these links. Additional findings suggested that prosocial, disruptive, and shy behaviors partially mediated the links between peer representations and acceptance. Contrary to expectations, peer representations partially mediated the links only between acceptance and shy behavior. Implications of findings related to the roles of adolescent social behavior, the moderating role of gender, quality of peer representations, and social acceptance are discussed.

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ADOLESCENCE: THE ROLES OF SOCIAL BEHAVIOR
AND REPRESENTATIONS OF PEERS

by

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Understanding Low Social Acceptance in Adolescence: The Roles of Social Behavior and Representations of Peers

The extent to which individuals are accepted by their peers is considered to be an important indicator of social and emotional well-being across the lifespan (see Asher & Dodge, 1986; Crick & Dodge, 1994; Parker & Asher, 1987; Rubin, Bukowski, & Parker, 2006). Beginning in early childhood, persons who gain their peers' acceptance often show signs of positive well-being, whereas persons who do not gain their peers' acceptance typically exhibit a variety of social and emotional difficulties. For example, compared to their accepted counterparts, low accepted children and young adolescents often exhibit poorer social competence and greater delinquent behavior (Coie & Kupersmidt, 1983; Deater-Deckard, 2001; Dishion, Patterson, Stoolmiller, & Skinner, 1991; Elliot, 1994; Miller-Johnson, Coie, Maumary-Gremaud, Lochman, & Terry, 1999; Rydell, Hagekull, & Bohlin, 1997), maintain fewer friends (Wentzel & Caldwell, 1997), experience more loneliness and depression (Asher, Parkhurst, Hymel, & Williams, 1990; Asher & Wheeler, 1985; Cassidy & Asher, 1992; Qualter & Munn, 2002; Quiggle, Garber, Panak, & Dodge, 1992), have poorer academic success (Diehl, Lemerise, Caverly, Ramsay, & Roberts, 1998; Dishion, 1990; Knitzer, Steinburg, & Fleisch, 1991; Ollendick, Weist, Borden, & Greene 1992; Pettit, 1997), and exhibit later chronic conduct disorders in adolescence (Coie, Lochman, Terry, & Hyman, 1992; Dishion et al., 1991; see Dodge & Pettit, 2003, for a review). Because low social acceptance has been linked consistently to a variety of social and emotional problems during childhood (Bierman, 2004; Crick & Ladd, 1993; Parker & Asher, 1987) and early adolescence (Miller-Johnson et al., 1999; Parkhurst & Asher, 1992), researchers have been interested in identifying the correlates of low social acceptance during these developmental periods.

Although considerable work with children and young adolescents has been devoted to examining the behavioral (e.g., aggression) and cognitive (e.g., negative representations of peers) correlates of low social acceptance (see Alderfer, Wiebe, & Hartmann, 2001; Asher & Coie, 1990; Crick & Dodge, 1994; Dygdon, Conger, & Keane, 1987; Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001; Ladd & Burgess, 1999), these correlates have been examined only rarely beyond childhood and early adolescence (for exceptions, see Crick & Ladd, 1993; Miller-Johnson, et al., 1999; Pakaslahti, Karjalainen, & Keltikangas-Jarvinen, 2002; Storch, Brassard, & Masia-Warner, 2003). The paucity in the existing literature is surprising considering that many researchers believe that peer relationships assume greater importance in the lives of individuals as they mature and develop greater capacities to initiate, maintain, and/or terminate their peer relations (Asher & Coie, 1990). Adolescents, for example, are presented with many opportunities to come in contact with peers and to spend time with them in a variety of contexts, such as those related to school, employment, and leisure activities (Asher, 1990). Because adolescence is marked by increasing autonomy and psychological independence (Ainsworth, 1989; Allen, Aber, & Leatbeater, 1990; Allen & Land, 1999; see Howes & Aikins, 2002, for review), failures can have a particularly damaging effect on adolescents' own personal growth and wellbeing (Allen, Hauser, Eickholt, Bell, & O'Connor, 1994; Bukowski, Newcomb, & Hartup, 1996). For these reasons, adolescence can be viewed as a particularly important period in which to examine both *social behavior* and *representations of peers*, and what roles these behavioral and cognitive factors play in understanding low social acceptance during later adolescence.

The primary goal of the present study, therefore, was to examine whether these two correlates of low social acceptance (i.e., social behavior and representations of peers)

that are important during childhood and early adolescence also play a role in low social acceptance during later adolescence.

Social Behavior and Low Social Acceptance

One of the most important correlates of low social acceptance has been identified as negative social behavior (Coie, Dodge, & Coppotelli, 1982; Denham, McKinley, Couchoud, & Holt, 1990). A wealth of studies has shown that children and young adolescents' negative social behavior (i.e., aggressive, disruptive, and shy behavior) is associated with the extent to which they are accepted by their peers (e.g., Coie et al., 1992; Ladd & Oden, 1979; Parkhurst & Asher, 1992). For example, Alderfer et al. (2001) found that pre-adolescent children who exhibited aggressive behavior towards their peers were less socially accepted compared to other children who exhibited prosocial behavior towards their peers. Several studies of young adolescents also have indicated that individuals who behave aggressively and disruptively towards their peers are less likely to be accepted by their peers compared to children who do not display the same behavior (e.g., Coie, Dodge, & Kupersmidt, 1990; Elkins, 1958; Parkhurst & Asher, 1992; Pope, Bierman, & Mumma, 1991; for exception, see Sandstrom & Cillessen, 2006). Elkins (1958) found that eighth graders who engaged in disruptive behavior toward their peers were more likely to be identified by their peers as unattractive (e.g., "smelly" or "dirty") than other eighth-graders. Findings also suggest that individuals who engage in negative social behavior (e.g., aggressive behavior) are often perceived to be less athletic and less intelligent than other individuals (e.g., Langlois & Stephan, 1977; Lerner & Lerner, 1977).

In addition to the negative social behaviors described above, some evidence suggests that shy children and young adolescents are less likely to be accepted by peers (Enger,

1993; Rubin, 1990; see Rubin & Asendorpf, 1993, for a review). In early childhood, certain types of withdrawn behavior are not thought to be linked to low social acceptance, such as solitary-passive behavior, however, reticent behavior is thought to be less accepted by the peer group (see Rubin, Burgess, & Coplan, 2002, for a review). As described by Rubin et al. (2002), children who engage in solitary-passive behavior exhibit both exploratory and constructive play but are motivated voluntarily to be alone from the peer group. In contrast, children who are reticent are thought to engage in socially wary behavior and are motivated to interact with peers, but do not engage with peers (see Rubin & Asendorpf, 1993, for a review). Unlike solitary-passive children who choose to be play alone even among peers, reticent children are thought to exhibit an approach/avoidance conflict among peers. However, there is evidence that both types of social withdrawal are associated with low social acceptance regardless of motivation (Coplan, Prakash, O'Neil, & Armer, 2004). Indeed, a positive association between these behaviors and low social acceptance is thought to emerge during middle childhood and early adolescence because during this period these individuals' behaviors are thought to be interpreted negatively by peers (Asher & Coie, 1990; Crozier, 2000; Fordham & Stevenson-Hinde, 1999). For example, studies have demonstrated that children and young adolescents who are hesitant and/or do not attempt to initiate interactions with peers have peers who believe that these shy individuals are avoidant, standoffish, and disinterested in peer interaction (e.g., Crozier, 2001).

Given the substantial evidence from child and adolescent studies of links between negative social behavior and low social acceptance, it is reasonable to consider issues of causality. Two causal pathways are possible: peer-directed negative social behavior (e.g., hitting or pushing) may contribute to a status of low social acceptance, and/or rejection

by peers (e.g., low social acceptance by peers due to physical unattractiveness) may contribute to the emergence of peer-directed negative social behavior. With respect to the first notion that negative social behavior may drive low peer acceptance, longitudinal data and rigorous methodology have addressed this issue. For example, longitudinal data indicate that negative social behavior (e.g., aggression) in preschool predicts later peer rejection in elementary school. Ladd and Burgess (1999) followed a sample of children from kindergarten through second grade and found that aggressive behavior in kindergarten was stable over time and predicted low social acceptance in second grade. Furthermore, by having unacquainted second grade boys placed in groups and then observing peer-interactions during free-play sessions, Dodge (1983) was able to observe the emergence of low peer acceptance over time and provide experimental evidence that negative social behaviors influence low social acceptance. Specifically, results indicated that boys who behaved more aggressively (e.g., hitting other boys) and engaged in more solitary play were later identified at the end of the sessions as less accepted by their peers in these groups than other boys. With respect to girls, Gazelle, Putaliez, Li, Grimes and Kupersmidt et al. (2005) found that at the initial start of their five day consecutive study, “anxious solitary” girls displayed difficulties engaging with unfamiliar peers. However, contrary to Dodge’s findings with boys, anxious solitary girls overtime began to exhibit less behavioral difficulties as they experienced less mistreatment by their peers. Moreover, Coie and Kupersmidt (1983) found that fourth grade boys who behaved more aggressively in both familiar and unfamiliar groups across weekly sessions were more likely to have experienced peer rejection because of their negative social behavior. These findings underscore the importance of experimentally manipulating familiarity with peers

to demonstrate that individuals' negative social behavior may drive low acceptance (e.g., Dodge, 1983; see Asher & Dodge 1990, for a review).

An alternate theoretical pathway suggests that low social acceptance may also contribute to the emergence of negative social behavior. For example, individuals who are simply less accepted by their peers because of their outward appearance (e.g., they wear glasses and/or are “dorky”), socioeconomic status (e.g., living in government housing), and/or race may adopt particular negative behavioral strategies (e.g., acting out or withdrawing from the peer group) for protection against rejection by peers (e.g., Cole, Maxwell, & Martin, 1997). In support of this notion that low acceptance may drive negative social behavior, Hymel, Rubin, Rowden, and LeMare (1990) found that low accepted second graders were more likely to exhibit externalizing problems in fifth grade (including aggressive behavior towards peers) than their counterparts. These results indicate that low social acceptance in early childhood may predict future engagement in negative social behavior towards peers.

A careful review of the literature suggests a causal linkage between children and adolescents' negative social behavior and low social acceptance (e.g., Ladd & Burgess, 1999). Conversely, there is also literature that indicates low peer acceptance may contribute to the emergence of negative peer-directed behavior (e.g., Cole et al., 1997; Hymel et al., 1990). Taken together, the consideration of causality here suggests a model that may account for reciprocal effects between negative social behavior and low acceptance during childhood and adolescence. For example, an aggressive child who physically hits another child will likely be rejected by that target child as a result of his/her hurtful actions and perhaps by peers in general; in turn, rejection by peers may exacerbate the child's aggressive behavior toward peers in future situations. It also may

be possible that, for example, a shy boy who tends to engage in solitary play will likely be excluded by peers and/or ignored as a result of engaging in such behavior. In turn, the shy boy may become increasingly more withdrawn from the peer group as he develops and faces new situations with peers.

Adolescents' Representations of Peers and Low Social Acceptance

A second important correlate of social acceptance is the quality of individuals' peer representations (e.g., maladaptive social cognitions, hostile attributions, and patterns of social information processing). More specifically, although several social-cognitive models have been proposed to explain links between the ways children and adolescents process peer-related social information and their social acceptance (e.g., Crick & Dodge, 1994; Dodge, 1986; Huesmann, 1988; Rubin & Krasnor, 1986), representations of peers are one primary component of social information processing consistently found to operate within these models (Kupersmidt & DeRosier, 2004; see Gifford-Smith & Rabiner, 2004, for a review). Indeed, empirical evidence suggests that negative representations of peers (which include expectations of mistreatment by peers; e.g., Patterson, Kupersmidt, & Griesler, 1990; Putallaz & Gottman, 1983; Rudolph, Hammen, & Burge, 1995; Zhao & Suo, 2005) are strongly associated with low social acceptance and peer rejection (e.g., Burks, Dodge, Price, & Laird, 1999; Crick, Grotpeter, & Bigbee, 2002; MacKinnon-Lewis, Rabiner, & Starnes, 1999; Rudolph, et al., 1995). For example, in a sample of seven- to twelve-year-old children, Rudolph et al. (1995) found that children with negative peer representations were less socially accepted by their peers. MacKinnon-Lewis et al. (1999) also found that boys who held negative representations of familiar peers were less socially accepted by peers than other boys. Although the link between negative peer representations and low social acceptance has been well-replicated

with children, this link has rarely been examined with adolescents. Yet the few adolescent studies that have been conducted indicate similar linkages between negative peer representations and low social acceptance (e.g., Parker & Asher, 1987; see Gifford-Smith & Rabiner, 2004, for a review; Zhao & Su, 2005). For example, Zhao and Su (2005) found that thirteen- to seventeen-year-old adolescents who held negative peer-related representations were less likely to be socially accepted by their peers compared to their counterparts.

Although correlational data support the linkages between negative peer-related representations and low social acceptance (mainly in childhood), it is reasonable to consider two potential causal pathways. One pathway suggests that negative representations of peers (e.g., negative expectations, hostile attributions, and negatively biased social cognitions) may contribute to low social acceptance in the future, whereas a second pathway suggests that repeated experiences of peer rejection may lead to the development and maintenance of negative peer representations (see Dodge & Feldman, 1990; Gifford-Smith & Rabiner, 2004, for discussion of both pathways). More specifically, it may be that certain individuals who anticipate negative interactions with their peers may become less socially accepted by their peers, whereas other individuals who experience mistreatment by peers over time may begin to develop distorted representations that operate consistently in peer interactions. Therefore, in order to understand the developmental origins and trajectories of these two causal pathways, longitudinal studies can provide a means to investigate causality. Support for the first pathway (i.e., negative peer representations contribute to low social acceptance) is limited; however, some longitudinal data do support this linkage. For example, MacKinnon-Lewis et al. (1999) found that seven-year-old boys who held negative

representations about familiar peers were more likely to be less socially accepted by their peers two years later.

A second causal pathway suggests that repeated experiences of problematic peer relations may lead a child to develop and maintain negative representations of peers (see Gifford-Smith & Rabiner, 2004). That is, individuals who experience frequent hostile interactions (e.g., fighting) with peers may likely develop negative representations of their agemates because of those past interactions (e.g., negative expectations of peers). For example, an individual who is repeatedly picked on by his/her peers, such as being hit or called mean names, may develop distorted representations that peers will reject him/her. Moreover, although the influence of peer rejection on the development and maintenance of such negative representations of peers remains largely unknown, some longitudinal studies indicate that low social acceptance early in life influences the acquisition of negative representations of peers (e.g., Dodge et al., 2001; Egan, Monson & Perry, 1998). For example, in a two year longitudinal study of kindergartners, Dodge et al. (2003) found that chronic peer rejection affected children's representation of peers in a negatively biased manner. Children who were identified as less socially accepted by their peers were likely to have developed negative peer-related representations compared to their counterparts two years later.

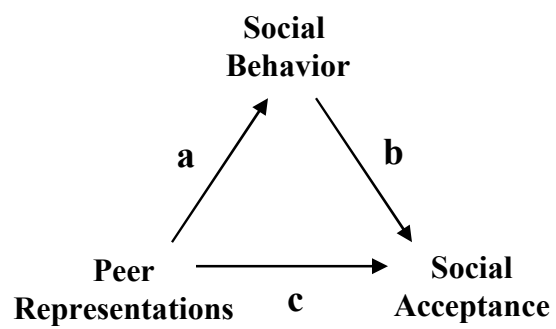
Given that there is empirical support for the two potential causal pathways between representations of peers and social acceptance (i.e., negative peer representations may contribute to low social acceptance, and problematic peer relations may lead to the development of negative peer representations), it is reasonable to believe that they *both* represent a feedback model of reciprocal effects (e.g., reinforcing loop). There is, indeed, some empirical support for this line of rationale; Mackinnon-Lewis et al. (1999)

conducted a two-year, longitudinal study where the mutually reinforcing effects between children's negative representations of peers and their low social acceptance were investigated. Results indicated that boys with negative representations of their peers were less socially accepted by peers six-months later; in turn, such experiences of low social acceptance were found to influence the likelihood of maintaining negative representations of familiar peers.

A Mediation Model

While considerable evidence suggests that negative representations of peers (e.g., negative expectations) are linked to low social acceptance (e.g., Burks et al., 1999; Crick et al., 2002; MacKinnon-Lewis et al., 1999; Rudolph et al., 1995), Crick and Dodge (1994) suggest that social behavior mediates the link between negative peer representations and low social acceptance (Figure 1 depicts this mediational model). Taking into account the interactions among these three factors (i.e., social behavior, peer representations, and social acceptance), this mediational model proposes that children's negative representations of peers (e.g., negative expectational biases) influence their likelihood of engaging in negative social behavior towards peers (Path a); the enactment of such negative social behavior, in turn, influences the extent to which children are socially accepted by their peers (Path b; see Crick & Dodge, 1994, for a review). Because of these relations, it is thought that social behavior mediates the causal effect of negative peer representations on low social acceptance (Path c). For example, Dodge and his colleagues (Dodge, Pettit, McClaskey, & Brown, 1986; Steinberg & Dodge, 1983) have found that children who misinterpret their peers' actions as hostile are more likely to respond aggressively towards their peers than other children (Path a; see Bargh, Limbardi, & Higgins, 1988; Gifford-Smith & Rabiner, 2004). As an outcome, children

Figure 1. The Mediational Role of Social Behavior

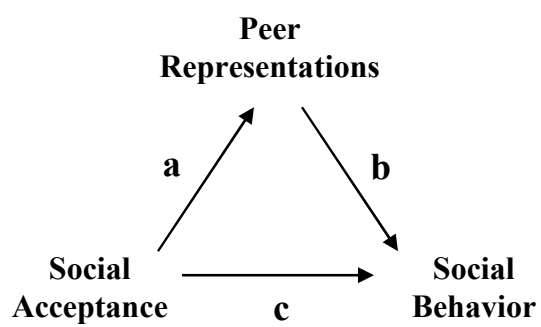


who engage in negative social behavior, such as aggressive behavior, are not likely to be accepted by their peers because most children will not tolerate their insensitive actions (Path b; e.g., Alderfer et al., 2001). Although prior studies have examined linkages between two of the three factors (i.e., social behavior, peer representations, and social acceptance) in this mediational model described above (e.g., shy behavior linked to low social acceptance; Rubin, Chen, McDougall, Bowker, & Mckinnon, 1995), researchers need to continue to explore and test the interactions among these three factors in a single mediational model during childhood and/or adolescence.

An Alternate Mediational Model

Although in the first model social acceptance is conceptualized as an outcome based upon research which suggest that low social acceptance predicts negative social behavior (see Gifford-Smith & Rabiner, 2004, for a review), it is reasonable to consider that social acceptance may (1) predict negative social behavior and (2) operate within a mediational model whereby negative representations of peers mediates the causal effect of low social acceptance on negative social behavior (see Figure 2). That is, this alternate mediational model suggests that children's negative peer-related experiences of low social acceptance influence the ways in which they develop negatively biased representations of peers (Path a; see Figure 2); these negatively biased representations of peers (e.g., negative expectations of peers), in turn, influence the ways in which children behave towards their peers (Path b; see Figure 2). Furthermore, children's negative peer-related representations are thought to mediate the relation between low social acceptance by peers and negative social behavior (Path c; see Figure 2). For example, children who are not accepted by their peers simply because they are considered less attractive than others are likely to develop negative representations of peers (e.g., negative expectations of

Figure 2. The Mediational Role of Peer Representations



being laughed at by peers). These negatively biased peer representations are thought to influence low accepted children's likelihood to engage in aggressive, disruptive, or shy behavior among their peers. Thus, it is reasonable to believe that children's negative representations of peers serve to mediate the relation between low social acceptance and negative social behavior. Indeed, although somewhat limited, empirical support for the notion that low social acceptance shapes negative peer representations does exist (Path a; see Figure 2; see Gifford-Smith & Rabiner, 2004, for a review). Similarly, findings have also indicated that negative peer relationships contribute to low social acceptance (e.g., Dodge et al., 2003). On the basis of such findings, it is reasonable to propose a mediational model which suggests that children's repeated experiences of low social acceptance influence the development and maintenance of negative peer-related representations (Path a), and, in turn, these negative peer representations subsequently influence children's engagement in negative social behavior with peers, such as disruptive behavior (Path b).

Although prior studies have examined connections between two of the three factors (i.e., social behavior, peer representations, and social acceptance) in this mediational model described above (e.g., negative representations of peers associated with low social acceptance; Rudolph et al., 1995), longitudinal studies need to continue to test (from a developmental perspective) the interactions among these three factors in a single mediational model during childhood and early adolescence (Dodge et al., 2003). In one longitudinal study, individuals were followed from first to third grade and from fifth to seventh grade. Findings revealed that children's representation of peers partially mediated previous experiences of low social acceptance on later aggressive behavior. Thus, there is some existing body of literature that peer representations may influence the

link between social acceptance and aggression. However, how peer representations may influence the link between social acceptance and other social behaviors remains unknown.

The Present Study

Summary of Hypotheses and Exploratory Questions

I have four principal research hypotheses in the present investigation (see Table 1 for list of hypotheses and research questions). The *first hypothesis* is that adolescent social behavior is linked to social acceptance in the peer group. More specifically, this investigation will focus on four types of social behavior that have been linked to children's social acceptance: prosocial, aggressive, disruptive, and shy behavior. Based on previous findings with children (see Eisenberg & Fabes, 2006, for a review), I hypothesize that adolescent peer-reported prosocial behavior is positively related to social acceptance. In contrast, I hypothesize that both peer-reported aggressive and disruptive behavior are negatively related to social acceptance. Finally, although the literature pertaining to the link between preschool children's shy behavior and peer social acceptance is mixed, empirical studies of older children and early adolescents indicate that shy/withdrawn behavior is associated with low social acceptance (e.g., Coplan et al., 2004); thus, I hypothesize that peer-reported adolescent shy behavior is negatively associated with social acceptance.

The *second hypothesis* of my study is that adolescents' representations of peers (i.e., the degree to which adolescents expect that their peers will respond to them in a helpful, supportive, and sensitive way) are linked to social acceptance. Because researchers suggest that children's negative representations of peers contribute to low social acceptance (e.g., Rudolph et al., 1995), it is important to examine whether the link

Table 1

Hypotheses and Research Questions Guiding the Present Study

Hypothesis #1:

Adolescent social behavior is linked to social acceptance.

Specific Hypotheses

- A. Peer-reported adolescent prosocial behavior is positively related to social acceptance.
 - B. Peer-reported adolescent aggressive behavior is negatively related to social acceptance.
 - C. Peer-reported adolescent disruptive behavior is negatively related to social acceptance.
 - D. Peer-reported adolescent shy behavior is negatively related to social acceptance.
-

Hypothesis #2:

Adolescent peer representations are linked social acceptance.

Specific Hypothesis

- A. Adolescent negative peer representations (i.e., expectations that their peers will be unhelpful, unsupportive, and insensitive in times of need) are negatively related to social acceptance.
-

Hypothesis #3:

Peer-reported adolescent social behavior mediates the link between peer representations and social acceptance.

Specific Hypotheses

- A. Peer-reported adolescent prosocial behavior mediates the link between negative representations of peers and low social acceptance.
- B. Peer-reported adolescent aggressive behavior mediates the link between negative representations of peers and low social acceptance.
- C. Peer-reported adolescent disruptive behavior mediates the link between negative representations of peers and low social acceptance.

- D. Peer-reported adolescent shy behavior mediates the link between negative representations of peers and low social acceptance.
-

Hypothesis #4:

Adolescents' representations of peers mediate the link between social acceptance and social behavior.

Specific Hypothesis

- A. Adolescents' negative representations of peers mediate the relation between peer-reported social acceptance and social behavior (i.e., prosocial, aggressive, disruptive, and shy behavior).
-

Research Question #1:

Does gender moderate the link between adolescents' social behavior and social acceptance?

Research Question #2:

Does gender moderate the link between adolescents' representations of peers and social acceptance?

exists in adolescents. Thus, I hypothesize that adolescent negative peer representations (e.g., expectations that their peers will be unhelpful, unsupportive, and insensitive in times of need) are negatively related to social acceptance.

The *third hypothesis* of this investigation is that the first mediational model proposed in this study reflects the connections among social behavior, representation of peers, and social acceptance (see Figure 1). That is, individuals' negative representations of their peers influence their social behavior which, in turn, influences their social acceptance in the peer group. I hypothesize, therefore, that peer-reported adolescent social behavior mediates the link between representations of peers and social acceptance. More specifically, I hypothesize that peer-reported prosocial, aggressive, disruptive, and shy behavior mediate the link between adolescents' negatively biased peer representations and low social acceptance.

Although the third hypothesis regarding the mediational model described above suggests that the link between peer representations and social acceptance is mediated by social behavior (see Figure 1), my *fourth hypothesis* is that an alternate model which suggests that the causal effect of social acceptance on social behavior is mediated by the mechanism of peer representations (see Figure 2) will also account for connections among social behavior, peer representations, and social acceptance. In particular, this alternate model suggests that social acceptance by peers influences the quality of individuals' representations of peers; in turn, their representations of peers influence their likelihood of engaging in positive (i.e., prosocial) or negative (i.e., aggressive, disruptive, and shy) social behavior. Thus, I hypothesize that adolescents' negative representations of peers mediate the relation between peer-reported social acceptance and social behavior (i.e., prosocial, aggressive, disruptive, and shy behavior).

The Moderating Role of Gender: Two Research Questions

Although considerable work has documented gender differences in child and adolescent development across multiple domains (see Rose & Rudolph, 2006; Ruble, Martin, & Berenbaum, 2006, for reviews), more studies should address the moderating role of gender in peer relationships (see Rose & Rudolph, 2006; Ruble et al., 2006; Underwood, 2004, for reviews). Extant findings that have documented gender differences in peer relationships indeed give reason to believe that gender may be a potential moderator of the links between (a) social behavior and social acceptance and (b) peer representations and social acceptance. Thus, I will review current findings related to gender differences in three peer-related domains: social behavior, social acceptance, and representations of peers. First, with respect to social behavior, in a recent review of the literature, Rudolph and Rose (2006) reported findings that demonstrated that generally girls in middle childhood exhibit more prosocial behavior than boys (e.g., Eisenberg & Fabes, 2006). Teacher and peer-reports of adolescent prosocial behavior support the notion that girls in this age group are more prosocial than boys (e.g., Ladd & Profilet, 1996). The role of gender differences in aggressive behavior has long been documented (Dodge, Coie, & Lynam, 2006). For example, preschool boys were rated by teachers as more physically aggressive than girls (Crick, Casas, & Mosher, 1997). These gender differences have been shown to remain stable with respect to physical aggression, including disruptive behavior (Broidy et al., 2003; see Dodge et al., 2006, for a review). Second, although the role of gender differences with respect to *social acceptance* is sparse, research has indicated, for example, that shy boys are less likely to be accepted than shy girls in the peer group as they grow older (e.g., Rubin, Chen, & Hymel, 1993; Stevenson-Hinde & Glover, 1996). Finally, findings related to understanding the

potential role gender differences plays with respect to representations of peers are limited. For instance, Wyatt and Haskett (2001) found no significant gender differences related to children's negative peer representations (e.g., negative expectations of peers) and the extent to which they were accepted social acceptance by peers. Due to such limited support, however, it still cannot be determined whether gender differences do indeed exist.

While gender differences have been documented to play an important role in studies of peer relationships (e.g., Broidy et al., 2003), gender differences have not been studied thoroughly in peer representations (for exception, see Wyatt & Haskett, 2001). Thus, it is reasonable and timely to explore the potential moderating role of gender when examining links among social behavior, social acceptance, and peer representations. I will examine two questions related to the prediction of adolescent social acceptance. First, does gender moderate the link between adolescent social behavior and social acceptance by peers? Second, does gender moderate the link between negative representations of peers and social acceptance? Because support for the moderating role of gender in relation to the link between (a) social behavior and social acceptance and (b) representations of peers and social acceptance remains largely unknown, this investigation of understanding the role of gender as a moderator must be exploratory in nature.

Method

Participants

Participants were 976 eleventh-grade students (600 females, 376 males) who were recruited from seven socioeconomically and racially diverse public high schools in the Washington D.C. area. The students were predominately White/Caucasian (69%); the

remaining students were Black/African American (9%), Asian (18%), and Hispanic/Latino (4%). Most students (81%) were living with both parents. All students whose parents provided written consent were allowed to participate. For their participation, students had their names entered into raffles for \$15 gift certificates to a local music store. Permission to recruit participants for this investigation was obtained from the University of Maryland's Institutional Review Board (Appendix A). A total of 1,095 participants were excluded from the study because of one of the following reasons: (a) school absence and (b) failure to complete each questionnaire measure.

Measures

Adolescents' representations of peers. The *Children's Expectations of Social Behavior Questionnaire* (Rudolph, Hammen, & Burge, 1995) was used to tap children's representations of peers. Specifically, this 15-item questionnaire taps children's expectations of their peers' responses to hypothetical aversive situations in which a child needs help, support, and sensitivity from his or her peers. This measure was modified to make it appropriate for situations that involved adolescents, and to include a 4-point response format (rather than a 3-point response format) ranging from (1) *most positive expectation* to (4) *most negative expectation* (Cassidy & Woodhouse, 1997; Appendix B). All items were reversed scored. For each item, adolescents read a vignette depicting a hypothetical situation and were then instructed to identify how the peers would respond to the situation. For example, one vignette stated, "You're hanging out in the school yard and one of the older students comes up and starts to pick on you. What do you think the other students in your class might do?" Four possible responses were: (1) "They might stick up for me and tell the older student to leave me alone" (expectation of support/comfort; 1 point), (2) "They might suggest I walk away" (expectation of

neutrality from peers; 2 points), (3) “They might just walk away so that they won’t be involved” (expectation of avoidance/indifference; 3 points), and (4) “They might join in with the other older student and start teasing me also” (expectation of rejection/hostility; 4 points). A summary score for each participant was calculated by summing across all 15 items; possible summary scores ranged from 15 to 60 with higher scores reflecting more negative expectations of peers. Rudolph et al. (1995) reported good psychometric properties for the original measure (e.g., good internal consistency, test-retest reliabilities and substantial construct validity in a sample of 7-to 12-year-old children). They also reported good convergent validity for this measure. For example, they found that children who had more negative representations of peers were significantly more likely to exhibit maladaptive social behavior and lower social competence. In the present study, the Cronbach’s alpha was .78.

Social behavior. A modified version of a peer-nomination instrument was used to assess adolescents’ social behavior (Parkhurst & Asher, 1992; Appendix C). This instrument contained four sections, and each section was used to assess a different social behavior: prosocial, aggressive, disruptive, and shy behavior. Within each section, adolescents were presented with an identical copy of a roster of 75 randomly selected classmates’ names who were also participants in the study. Following Parkhurst and Asher (1992), this roster was randomly generated from a larger list of *all* the adolescents at that school who were participating in the study (ranging from 83 to 378 across 7 schools). In order to ensure that each participant in this study had an equal opportunity to be nominated by his or her classmates, all participants within each school had their names listed on the same number of rosters. Consequently, each participant had a different roster from the other participants within his or her school. I chose to use this limited

nomination procedure because it would be impractical to have adolescents nominate all of the classmates in their grade level (see Parkhurst & Asher, 1992, for rationale behind the use of this limited nomination procedure in large secondary school settings).

However, unlike Parkhurst and Asher's (1992) procedure which only allowed for same gender peer- nominations, this study did not restrict peer-nominations to the same gender nominations

For each behavior, adolescents were given a set of instructions detailing how they should nominate classmates who either characterized the behavior of interest or who did not characterize the behavior of interest. To make their nominations, adolescents circled "yes" if the classmate characterized the behavior and "no" if the classmate did not characterize the behavior. They were also given the option to circle "I don't know this person." For prosocial behavior, adolescents nominated any classmate on his or her roster who was "cooperative, helpful, and does nice things." Descriptors for the remaining social behaviors were as follow: for aggressive behavior, "starts arguments or fights, says mean things, and gets mad easily"; for disruptive behavior, "breaks the rules, does things you're not supposed to, and gets into trouble at school"; and for shy behavior, "is shy and hangs back."

In order to create adolescents' prosocial, aggressive, disruptive, and shy behavior scores, proportion scores were created by dividing the number of peer-nominations that that adolescent received on each behavior by the number of possible peer-nominations that adolescent could have received from classmates who knew them. Because of missing data and different school sample sizes, these behavioral proportion scores were then normalized. Finally, corrections for the positively skewed distribution of these

normalized proportion scores were computed by using an arcsine square-root transformation (see Parkhurst & Asher, 1992).

Parkhurst and Asher (1992) have reported that this peer-nomination instrument has demonstrated substantial construct validity with respect to both social and emotional outcomes. In a study of middle school children, they found that participants who received fewer prosocial nominations and more aggressive nominations were more likely to experience peer rejection. Other studies of children and adolescents in both normative and non-normative samples have also reported validity data for this instrument with respect to school achievement, social loneliness, and lower social competence (Frederickson & Furnham, 2004; Qualter & Munn, 2002; Rudolph & Asher, 2000; and Wentzel, 2003). For example, Frederickson & Furnham (2004) reported that in a sample of eight- to twelve-year-old children who exhibited moderate learning difficulties, popular children were more likely to be nominated as prosocial and less likely to be nominated as aggressive and disruptive.

Social acceptance. Asher and Dodge's (1986) social acceptance measure was used in this study (Appendix D). This measure contained a set of written instructions asking adolescents to "rate the extent to which you like to be in activities with the following students." Below this set of instructions, was the same roster of 75 classmates that the adolescent used in the social behavior instrument. Adolescents used a 5-point Likert-type scale ranging from *not at all* (1) to *a lot* (5) to make their ratings. A social acceptance score for each participant was computed based upon ratings that the participant received from his or her classmates. This score was calculated first by taking the mean of all the ratings for that participant and then standardizing this mean within the participant's school.

In Asher and Dodge's (1986) study distinguishing between neglected and rejected children's social acceptance, good test-retest reliability and construct validity were reported. Other studies of children and adolescents in both normative and non-normative samples have also reported good psychometric properties using this measure with respect to social loneliness, school adjustment, and social competence (Diehl et al., 1998; Lochman, Wayland, & White, 1993; Rydell et al., 1997; Walker, 2004; Wentzel & Caldwell, 1997). For example, Diehl et al. (1998) reported good construct validity and predictive validity using Asher and Dodge's (1986) original measure in a normative sample of children in mixed-age classes. They found that children's attitudes towards school and classroom achievement were largely influenced by peer social acceptance. Moreover, in a longitudinal study of early adolescents, Wentzel and Caldwell (1997) reported substantial test-retest reliability and predictive validity, indicating that social acceptance mediated by prosocial behavior was related to adolescents' GPA during sixth and eighth grade.

Procedures

Data were gathered during the spring semester of adolescents' eleventh grade year. During two 50-minute classroom periods, adolescents completed questionnaire packets which included the following measures: a modified version of the *Children's Expectations of Social Behavior Questionnaire* (Cassidy & Woodhouse, 1997; Appendix B), a peer-nominated measure of four social behaviors (i.e., prosocial, aggressive, disruptive, and shy behavior; Appendix C), and a peer-rating social acceptance measure (Appendix D).

Results

I present my analyses in the following order: First, I report descriptive data for each variable used in this investigation. All the descriptive data were conducted first for all participants and then separately for boys and girls. Second, I report the correlations among the study variables. Third, I present findings that address the first two hypotheses regarding the links among social behavior, peer representations, and social acceptance. In addition to presenting results from these first two hypotheses, I also address the two research questions regarding the moderating role of gender with respect to links between (a) social behavior and acceptance and (b) peer representations and acceptance. Finally, I present findings related to the two mediation models proposed earlier.

Descriptive Data

The mean scores, standard deviations, and ranges for adolescents' social acceptance by peers, social behavior (i.e., prosocial, aggressive, disruptive, and shy behavior), and representations of peers are presented in Table 2. All variables were centered and gender was effect coded (-1 = female; 1 = male; see Aiken & West, 1991).

Correlations among Social Acceptance, Social Behavior, and Peer Representations

Zero-order correlations were obtained for the entire sample (see Table 3) and also obtained separately for boys and girls (see Tables 4 and 5).

The Links between Social Behavior and Social Acceptance, and the Moderating Role of Gender

Regression analyses were used to test the first hypothesis regarding whether adolescents' social behavior was linked to the extent to which he/she was accepted by peers. Findings suggested that adolescents' social behavior was linked to social acceptance. Specifically, results indicated that prosocial behavior was positively linked

Table 2

Mean Scores, Standard Deviations, and Ranges of Social Acceptance, Social Behavior, and Peer Representations for Entire Sample Size

	<i>M</i>	<i>SD</i>	<i>Range</i>
Social acceptance			
Total	2.94	.48	1.00-4.38
Male	2.89	.49	1.17 – 4.27
Female	2.97	.47	1.00 – 4.38
Prosocial behavior			
Total	.77	.18	0 – 1.00
Male	.73	.18	0 – 1.00
Female	.79	.17	0 – 1.00
Aggressive behavior			
Total	.15	.16	0 – 1.00
Male	.17	.17	0 – 0.91
Female	.14	.15	0 – 1.00
Disruptive behavior			
Total	.16	.19	0 – 1.00
Male	.22	.22	0 – 1.00
Female	.13	.16	0 – 0.88

	<i>M</i>	<i>SD</i>	<i>Range</i>
<hr/>			
Shy/Withdrawn behavior			
Total	.31	.26	0 – 1.00
Male	.31	.25	0 – 1.00
Female	.32	.27	0 – 1.00
Representations of peers			
Total	22.48	5.46	15.00 – 48.00
Male	24.35	6.60	15.00 – 48.00
Female	21.31	4.22	15.00 – 48.00

Note: Mean scores for all four social behaviors were computed from adolescents' proportion scores.

Total n = 976. n = 376 boys. n = 600 girls.

*p < .05. ** p < .01.

Table 3

Zero-order Correlations Among Social Acceptance, Social Behavior, and Peer Representations for Entire Sample Size

	1	2	3	4	5	6
1. Peer representations	—	-.18**	-.13**	.05	.08**	.12**
2. Social acceptance		—	.63**	-.48**	-.23**	-.19**
3. Prosocial behavior			—	-.81**	-.59**	.23*
4. Aggressive behavior				—	.66**	-.45**
5. Disruptive behavior					—	-.50**
6. Shy/Withdrawn behavior						—

Total n = 976.

*p < .05. ** p < .01.

Table 4

Zero-order Correlations Among Girls' Social Acceptance, Social Behavior, and Peer Representations

	1	2	3	4	5	6
1. Peer representations	—	-.20**	-.07	.04	.01	.10*
2. Social acceptance		—	.63**	-.47**	-.13**	-.15**
3. Prosocial behavior			—	-.81**	-.59**	.29**
4. Aggressive behavior				—	.64**	-.47**
5. Disruptive behavior					—	-.53**
6. Shy/Withdrawn behavior						—

Total n = 600 girls.

*p < .05. ** p < .01.

Table 5

Zero-order Correlations Among Boys' Social Acceptance, Social Behavior, and Peer Representations

	1	2	3	4	5	6
1. Peer representations	—	-.14**	-.10	-.01	.01	.26**
2. Social acceptance		—	.64**	-.48**	-.17**	-.26**
3. Prosocial behavior			—	-.79**	-.55**	.15**
4. Aggressive behavior				—	.66**	-.41**
5. Disruptive behavior					—	-.52**
6. Shy/Withdrawn behavior						—

Total n = 376 boys.

*p < .05. ** p < .01.

to social acceptance (see Table 6) whereas adolescents' aggressive (see Table 7) and disruptive (see Table 8) behaviors were both negatively linked to acceptance by peers. Similarly, findings suggested that shy behavior was negatively associated with adolescents' social acceptance (see Table 9).

Given the evidence above concerning social behavior and acceptance, it is reasonable to examine the role gender might play in moderating this link during adolescence. Indeed, the first research question proposed in this study was related to understanding the role that gender might play *as a moderator* between the links of social behavior and adolescents' social acceptance. To date, understanding gender as a moderator has been most often ignored by researchers while gender differences have been largely studied. This lack of work is surprising considering that the study of gender as moderator would provide much needed information about the quality of adolescents' peer relations. For example, testing gender as a moderator would provide evidence as to whether adolescent girls who behave in overtly aggressive acts towards their peers are less accepted than boys who may engage in similar acts.

To further test whether gender moderated the links between social behavior and acceptance in this study, interaction terms were computed (see Aiken & West, 1991) by multiplying each social behavior (i.e., prosocial, aggressive, disruptive, and shy) by gender separately. The product was then entered in the third step according to the mediational analyses described above (see Tables 6, 7, 8, and 9). Findings suggested that the interaction between shy behavior and gender in the prediction of social acceptance emerged as significant (see Table 9 and Figure 3). Results from follow-up analyses (including t-tests) revealed that (a) high shy boys were significantly less socially accepted than low shy boys, (b) high shy boys were also less likely to be socially accepted than

Table 6

Hierarchical Regression Analysis Predicting whether Adolescent Gender Moderated the Links between Prosocial Behavior and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.40	327.79 (2, 973)
Prosocial behavior	3.04**	.12	.63	.40		
Adolescent gender	.05*	.03	.05	.01		
Step 2					.40	.40 (1, 972)
Prosocial behavior	3.05**	.12	.65	.40		
Adolescent gender	-.03	.14	-.03	.00		
Prosocial behavior X Gender	.08	.12	.09	.00		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 7

Hierarchical Regression Analysis Predicting whether Adolescent Gender Moderated the Links between Aggressive Behavior and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.23	145.87 (2, 973)
Aggressive behavior	-.2.10**	.13	-.48	.22		
Adolescent gender	-.02	.03	.02	.00		
Step 2					.23	.39 (2, 972)
Aggressive behavior	-2.10**	.13	-.48	.22		
Adolescent gender	.01	.05	.01	.00		
Aggressive behavior X Gender	.01	.01	.06	.00		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 8

Hierarchical Regression Analysis Predicting whether Adolescent Gender Moderated the Links between Disruptive Behavior and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.05	26.59 (2, 973)
Disruptive behavior	-.86**	.13	-.22	.05		
Adolescent gender	-.02	.03	-.02	.00		
Step 2					.05	3.01 (1, 972)
Disruptive behavior	-.86**	.13	-.22	.05		
Adolescent gender	-.09	.05	-.09	.01		
Disruptive behavior X Gender	.01	.01	.06	.00		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 9

Hierarchical Regression Analysis Predicting whether Adolescent Gender Moderated the Links between Shy Behavior and Social Acceptance (N = 976)

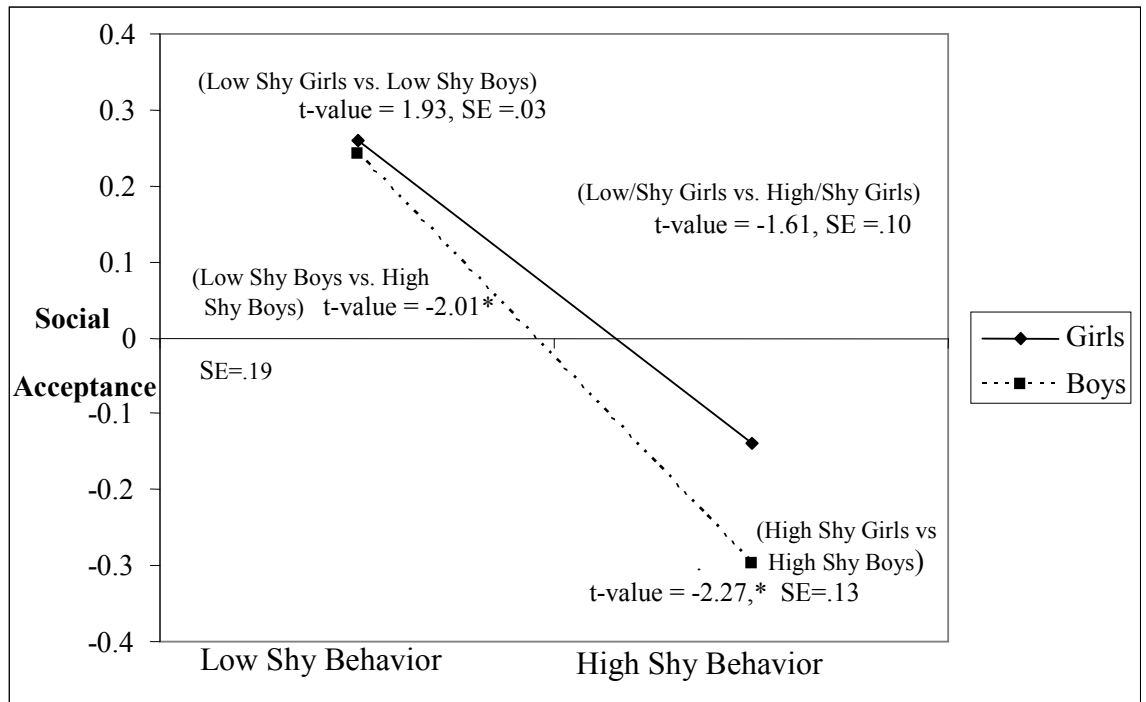
Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.04	21.91 (2, 973)
Shy/Withdrawn behavior	-.56**	.09	-.19	.04		
Adolescent gender	-.08**	.03	-.09	.01		
Step 2					.05*	5.15 (1, 972)
Shy/Withdrawn behavior	-.62**	.10	-.21	.04		
Adolescent gender	.04	.06	.04	.00		
Shy/Withdrawn behavior X Gender	-.22**	.10	-.15	.01		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Figure 3.

The Link between Shy Behavior and Social Acceptance by Peers: The Moderating Role of Gender



Note. Transformed scores for social acceptance were used. Proportion scores were used for shy behavior.

* $p < .05$.

high shy girls, (c) high shy girls were not significantly more likely to be less socially accepted by peers than low shy girls (d) low shy boys did not differ from low shy girls. Interactions between (a) prosocial behavior, (b) aggressive behavior, and (c) disruptive behavior and gender in the prediction of adolescents' social acceptance by peers were not significant (see Tables 6, 7, and 8).

The Links between Peer Representations and Social Acceptance, and the Moderating Role of Gender

Additional regression analyses were employed to test the second hypothesis that adolescents' negative peer representations would be negatively linked with social acceptance by peers. Indeed, evidence revealed that adolescents who held more negative peer representations were likely to be less socially accepted by their peers (see Table 10). Such findings suggest that adolescents who expect that their peers will treat them harshly are less accepted by their peers.

Another aim in this study was to explore whether gender moderated the links between peer representations and social acceptance by the peer group. To further test gender as moderator, an interaction term was computed by multiplying peer representations by gender. Using regression analysis, representation of peers was entered in the first step of the procedure and the interaction term was entered in the second step. The interaction between representations of peers and gender in the prediction of adolescents' social acceptance were not significant. Thus, gender did not moderate the links between adolescents' peer representations and social acceptance.

Table 10

Hierarchical Regression Analysis Predicting whether Adolescent Gender Moderated the Links between Peer Representations and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.03	17.69 (2, 973)
Peer Representations	-.03**	.01	-.17	.03		
Adolescent gender	-.04	.03	-.04	.00		
Step 2					.04	3.23 (1, 972)
Peer Representations	-.03**	.00	-.19	.03		
Adolescent gender	-.04	.03	-.04	.00		
Peer Representations X Gender	.01	.01	.06	.00		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

The Link between Peer Representations and Peer Acceptance: The Mediating Role of Social Behavior

My third hypothesis stated that social behavior would mediate the linkage between representations and acceptance by peers. Following guidelines established by Baron and Kenny (1986), results from regression analyses suggested that prosocial, aggressive, disruptive, and shy behavior did not fully mediate the links between adolescents' peer representations and social acceptance (see Tables 11, 12, 13, and 14). That is, although social behavior was controlled for, the effect of peer representations continued to predict social acceptance. To further investigate whether partial mediation occurred, Sobel tests (1982) were conducted, testing for the indirect effect of peer representations on social acceptance through adolescents' social behavior (i.e., prosocial, aggressive, disruptive, shy behavior). The test for aggressive behavior did not suggest that partial mediation occurred (test statistic = -1.56, $p > .05$). Three additional Sobel tests were significant, indicating that adolescents' prosocial (test statistic = -4.17, $p < .01$), disruptive (test statistic = -2.43, $p < .01$), and shy behavior (test statistic = -3.00, $p < .01$) partially mediated the links between their peer representations and acceptance by peers (Baron & Kenny, 1986; Clogg, Petkova, & Shihadeh, 1992; Sobel, 1982).

Links between Acceptance and Social Behavior: The Mediating Role of Peer Representations

Furthermore, I hypothesized that adolescents' representations of peers would mediate the linkage between their social acceptance by peers and engagement in various social behaviors (i.e., prosocial, aggressive, disruptive, and shy behavior). Although similar regression analyses were used to examine adolescents' representations of peers as a mediator, peer representations still significantly predicted social behavior even after

Table 11

Hierarchical Regression Analysis Predicting whether Adolescents' Prosocial Behavior Mediated the Links between Peer Representations and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.40	646.96 (2, 973)
Prosocial behavior	2.98**	.12	.63	.40		
Step 2					.41	16.35 (1, 972)*
Prosocial behavior	2.92**	.12	.62	.38		
Peer representations	-.02**	.01	-.10	.02		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 12

Hierarchical Regression Analysis Predicting whether Adolescents' Aggressive Behavior Mediated the Links between Peer Representations and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.23	289.23 (2, 973)
Aggressive behavior	-2.09**	.12	-.48	.23		
Step 2					.25	33.33 (1, 972)**
Aggressive behavior	-2.06**	.12	-.47	.22		
Peer representations	-.03**	.01	-.16	.03		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 13

Hierarchical Regression Analysis Predicting whether Adolescents' Disruptive Behavior Mediated the Links between Peer Representations and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.05	50.56 (2, 973)
Disruptive behavior	-.86**	.13	-.22	.05		
Step 2					.08	28.85 (1, 972)**
Disruptive behavior	-.81**	.12	-.21	.04		
Peer representations	-.03**	.01	-.17	.03		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 14

Hierarchical Regression Analysis Predicting whether Adolescents' Shy/Withdrawn Behavior Mediated the Links between Peer Representations and Social Acceptance (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.04	35.59 (2, 973)
Shy/Withdrawn behavior	-.56**	.09	-.19	.04		
Step 2					.06	27.49 (1, 972)**
Shy/Withdrawn behavior	-.50**	.09	-.17	.03		
Peer representations	-.02**	.01	-.16	.03		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

controlling for social acceptance. Hence, full mediation could not be established in this model (Baron & Kenny, 1986). Results suggested that adolescents' peer representations did not fully mediate the linkage between adolescents' social acceptance and engagement in prosocial, aggressive, disruptive, and shy behavior and (see Tables 15, 16, 17, and 18). To further test for partial mediation, Sobel (1982) tests were conducted. One test was statistically significant demonstrating that adolescents' peer representations partially mediated the linkage between shy behavior and acceptance by peers (test statistic = -2.40, $p < .05$).

Discussion

The principal aim of this investigation was to determine whether adolescents' social behavior and representations of peers would be associated with the extent to which they were accepted by peers. Results demonstrated that adolescents' prosocial behavior was positively associated with social acceptance whereas adolescents' aggressive, disruptive, and shy behaviors were negatively associated with social acceptance by peers. These findings add to the growing body of literature which suggests that prosocial behavior is positively linked with peer acceptance whereas negative social behavior such as aggression, is negatively linked with peer acceptance (see Dodge et al., 2006, and Eisenberg & Fabes, 2006, for reviews). Furthermore, results which reveal that shy eleventh graders are less socially accepted by their peers indicate that shy behavior continues to be linked with low social acceptance/peer rejection beyond the early to late childhood years (Rubin et al., 1993; see Rubin & Coplan, 2002, for a review). The consistency of this link across childhood and adolescence may support the notion that peers may perceive shy children and adolescents as less friendly and uninterested in joining peer activities (Asendorpf & Rubin, 1993; Crozier, 2001 see Rubin & Coplan,

Table 15

Hierarchical Regression Analysis Predicting whether Adolescents' Peer Representations Mediated the Links between Social Acceptance and Prosocial Behavior (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.02	17.88 (2, 973)
Peer representations	-.01**	.00	-.13	.02		
Step 2					.40	618.01 (1, 972)**
Peer representations	.00	.00	-.02	.00		
Social Acceptance	.13**	.01	.63	.40		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 16

Hierarchical Regression Analysis Predicting whether Adolescents' Peer Representations Mediated the Links between Social Acceptance and Aggressive Behavior (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.00	2.46 (2, 973)
Peer representations	.00	.00	.05	.00		
Step 2					.23	288.16 (1, 972)
Peer representations	.00	.00	-.04	.00		
Social Acceptance	-.11**	.01	-.49	.23		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 17

Hierarchical Regression Analysis Predicting whether Adolescents' Peer Representations Mediated the Links between Social Acceptance and Disruptive Behavior (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.00	6.951 (2, 973)
Peer representations	.00*	.00	.08	.01		
Step 2					.05	45.35 (1, 973)
Peer representations	.00	.00	.05	.00		
Social Acceptance	-.06**	.01	-.21	.04		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

Table 18

Hierarchical Regression Analysis Predicting whether Adolescents' Peer Representations Mediated the Links between Social Acceptance and Shy Behavior (N = 976)

Variable	B	SE B	β	sr^2	R^2	$\Delta F (df)$
Step 1					.01	13.42 (2, 973)
Peer representations	.00*	.00	.08	.01		
Step 2					.04	29.09 (1, 972)**
Peer representations	.01*	.00	.09	.01		
Social Acceptance	-.06**	.00	-.17	.03		

Note. Total n = 976. n = 376 for boys. n = 600 for girls.

*p < .05. ** p < .01.

2002, for a review). As a consequence, peers may choose to ignore and/or reject shy children and adolescents.

Another aim of the present investigation was to explore whether gender moderated the connection between adolescent social behavior and peer acceptance in late adolescence. Results indicated that gender did not moderate the links between (a) prosocial behavior, (b) aggressive behavior, and (c) disruptive behavior and social acceptance. Such findings provide consistent support for evidence which suggests that prosocial behavior is acceptable among peers (see Asher & Coie, 1990, and Eisenburg & Fabes, 2006, for reviews) whereas aggressive and disruptive behavior are largely unacceptable among peers, regardless of gender (e.g., Coie et al., 1990).

In this study, data did suggest that gender moderated the link between shy behavior and peer acceptance. Consistent with empirical findings largely with a younger sample (Coplan et al., 2004; see Rubin & Coplan, 2002, for a review), evidence indicated (a) high shy boys were less socially accepted by peers than low shy boys, (b) high shy boys were also less socially accepted than high shy girls, and (c) low shy boys did not differ from low shy girls. Whether adolescent girls engaged in low or high shy behavior did not significantly relate to the extent to which they were socially accepted by peers. Such findings for shy boys corroborate childhood and adolescent studies that suggest that the developmental trajectory for shy boys becomes increasingly more negative in several domains, including rejection by peers and increased development of internalizing problems (e.g., Coplan et al., 2001; Coplan et al., 2004; Gazelle, 2006; Rubin et al., 1993; Stevenson-Hinde & Glover, 1996). Because shy boys may have experienced repeatedly low social acceptance by peers and parents through out childhood, compared to shy girls, it is possible that they begin to “move away from the world” earlier on than

shy girls in childhood. For example, shy boys may be more socially withdrawn than girls in sixth grade compared to girls. As Caspi, Beam, and Elder (1988) theorized such “moving away from the world” at a greater rate developmentally may lead shy boys to engage in more pronounced shy behaviors during adolescence among peers, which, in turn, leads to greater rejection by peers compared to shy adolescent girls (see Caspi et al., 1988).

Finally, results indicating that shy boys are less socially accepted than shy girls may be possible in part because of varying expectations that Western culture (i.e., parents and peers) have for shy boys compared to shy girls (e.g., Sadker & Sadker, 1994; Stevenson-Hinde, 1989). Thus, this difference may explain why shy boys might be less socially accepted than shy girls. For example, within Western cultures, it may be more tolerable for shy girls to remain more withdrawn from the peer group (see Rubin & Coplan, 2002, for a review) whereas shy boys, however, may be expected to engage in more athletic sports, initiate relationships, and interact among the peer group at school.

Additional results from this investigation revealed that adolescents who held negatively biased representations (e.g., distorted expectations of mistreatment by peers) of their peers were less accepted. Data are consistent with childhood studies which demonstrate that such negatively biased representations of peers relate to the extent to which children are socially accepted by their peers (e.g., Rudolph et al., 1995). For example, MacKinnon-Lewis et al. (1999) found that boys who held more negative representations of familiar peers were less accepted by their peers compared to boys who held more positive representations of familiar peers. Findings from this study also support the relatively few adolescent studies which suggest that adolescents who hold negatively biased representations of their peers are less socially accepted by their peers

compared to their counterparts (see Gifford-Smith & Rabiner, 2004, for a review, see Zhao & Su, 2005). The consistency of the associations between negative representations of peers and low social acceptance across development may in part be due to adolescents' previous experiences of mistreatment by peers and/or rejection from peers in early childhood. Indeed, these negative experiences have been shown to shape representations of peers (see Asher & Coie, 1990, and Gifford-Smith & Rabiner, 2004, for reviews) and ultimately influence individuals' social behavior and acceptance by peers. Finally, these results suggest that there may indeed be a developmental linkage between adolescents' negatively biased patterns of processing peer information and quality of peer relationships. That is, the present findings demonstrate the need for a developmental approach to the study of the ways representations of peers influence social acceptance beginning in early childhood.

An additional goal of this study was to explore whether gender played a moderating role between these links of peer representations and peer acceptance. Findings revealed that gender did not moderate the links between adolescents' negatively biased peer representations and the extent to which they were accepted by peers. These results may indicate that the link between how adolescents perceive their peers and the extent to which they are socially accepted is not directly affected by whether they are male or female (see Table 10). Such findings however add to our understanding of the moderating role of gender in adolescence and also demonstrate the need for future studies to examine the moderating role of gender in peer relations. For example, whether relational aggression exhibited by girls is more socially accepted may in part shed light on the relationship between internalizing problems in girls and social acceptance by peers.

Tests of Mediational Models

Another goal of this investigation was to examine whether adolescents' social behavior (i.e., prosocial, aggressive, disruptive, and shy behavior) was the mechanism whereby peer representations influenced adolescents' social acceptance by peers (see Figure 1). Results confirmed expectations that prosocial, disruptive, and shy behavior mediate the connection between representations of peers and acceptance by peers. These findings support data that suggest that the quality of individuals' representations of parents and peers ("internal working models") relate to ways in which individuals choose to behave towards others (Bowlby 1969/1982, 1973, 1988; Berlin & Cassidy, 1999; Main, Kaplan, & Cassidy, 1985; see Gifford-Smith & Rabiner, 2004, for a review; Sroufe & Fleeson, 1988) and, in turn, for example, how then peers might respond towards these individuals (see Crick & Dodge, 1994). If an adolescent, for example, develops a negatively biased peer representation (e.g., beliefs that peers are most often hostile and aggressive), he/she is likely to interpret inaccurately another peer's ambiguous behavior and increase the likelihood to interpret peer's motives as hostile and intentional (e.g., such as a peer tripping and then bumping into the adolescent). As a result of the adolescent's misinterpretation of the peer's action, the adolescent will be more likely to respond negatively towards the peer by shoving her/him; which, in turn, influences the peer to reject the adolescent by walking away or behaving aggressively in return (see Crick & Dodge, 1995; Dodge, 1986)

Contrary to expectations, results suggested that aggressive behavior did not mediate the linkage between peer representations and social acceptance. Interestingly, these findings build upon a growing body of work that suggests that aggressive behavior might not always be associated with negative representations of peers and low social

acceptance. Recent advancements in the field of aggression and perceived popularity research suggest that aggressive adolescents may often be perceived as popular but not necessarily liked (e.g., Cillessen & Rose, 2005). Thus, it may be possible that several adolescents who were nominated as aggressive in this sample were also perceived as popular and thus highly accepted (according to the measure in this study), regardless of the quality of their representations of peers (see Cillessen & Mayuex 2004, for a review with respect to sociometric status and peer acceptance). Consistent with this evidence, it would be reasonable then that aggressive behavior might not mediate these links (e.g., Addler & Addler, 1998; Cillessen & Rose, 2005; Coie et al., 1990; Sandstrom & Cillessen, 2006)

The alternate mediational model (proposed earlier) suggested that peer representations might serve as the mediator between social acceptance and social behavior. Contrary to the study hypotheses, peer representations did not mediate links between adolescents' social acceptance and (a) prosocial behavior, (b) aggressive behavior, and (c) disruptive behavior. Such findings suggest that the quality of adolescents' peer representations may not be the dominant process by which low social acceptance is linked to social behavior. In contrast, however, results did indicate that representations of peers partially mediate the link between adolescents' social acceptance and engagement in shy behavior. These findings suggest that low social acceptance (context of peer rejection) may indeed relate to engagement in shy behavior through the quality of peer representations. For example, recent data (Gazelle et al., 2005) have suggested that anxious solitary girls exhibited fewer behavioral difficulties interacting with peers as mistreatment by peers decreased. Thus, it may be possible in the present study that adolescents' representations of peers might only partially mediate the extent to

which they are accepted and engage in shy behavior because positive experiences with peers in certain contexts may increase their acceptance and decrease their withdrawal.

Study Contributions

The contributions from this present investigation are noteworthy in several respects. First, the results obtained in this study add much needed data to the existing body of literature on peer relations in later adolescence. For example, although childhood studies have consistently indicated that prosocial, aggressive, and disruptive behavior are linked to social acceptance by peers, the existence of these links has been studied rarely in adolescence. Similarly, the results obtained here that indicated that adolescents' shy behavior is associated with low social acceptance converges with the relatively few studies that have found similar results in older children and early adolescence (see Rubin & Coplan, 2004, for a review). Second, although findings have shown that negative peer representations have been linked repeatedly to low social acceptance mainly in childhood, this study demonstrates that indeed this link continues to exist in adolescence.

Third, findings related to the interactions among social behavior, peer representations, and peer acceptance suggest two models which propose that some aspects of adolescents' negative social behavior and negative representations of peers may both influence and be influenced by low social acceptance by peers. For example, data suggest adolescents with negative representations will likely engage in negative social behavior (e.g., shy behavior) towards peers, which, in turn, contributes to the extent to which they are accepted by peers. At the same time, the data also suggested that adolescents who are less socially accepted by peers because of reasons other than their social behavior (e.g., being less athletic) were likely to hold negative representations of

their peers. As an outcome, adolescents' with negative peer representations were likely to engage in negative social behavior (i.e., shy behavior). Thus, this study revealed how negative peer representations, social behavior, and social acceptance interact and how these factors work together in a broader theoretical paradigm.

Fourth, this study contributed to the existing body of literature with respect to understanding the moderating role of gender in relation to the link between shy behavior and social acceptance by peers. Results suggested that high shy boys, compared to high shy girls, were less socially accepted. Also, evidence suggested that high shy boys, compared to low shy boys, were less socially accepted by peers. In contrast, findings revealed that high shy girls did not differ from low shy girls. To my knowledge, this study is the first to demonstrate that older adolescent boys' shy behavior is associated with low peer acceptance (e.g., Caspi et al., 1988).

Study Limitations

Although this investigation yielded valuable information concerning the relations among social behavior, representation of peers, and social acceptance in adolescence, several limitations did exist. First, the cross-sectional nature of this study precluded an examination of the developmental processes that may have influenced the adolescents to hold more negatively biased representations of their peers and/or to engage in shy behavior as opposed to aggressive behavior towards their peers. Second, although the measure of social acceptance in this study provided information about adolescents not previously known in the literature, the measure did not differentiate among rejected, neglected, and adolescents who might have been only perceived to be popular but not necessarily accepted by individual peers (Gazelle, 2001). This limitation indeed hinders the generalizability of findings in this study. Third, given studies which suggest that boys

tend to nominate other boys differently from how they nominate girls (Parkhurst & Asher, 1992), failure to restrict rosters to same-gender for peer-nomination measures of social behavior and social acceptance may have influenced the generalizability of results.

Fourth, due to the large size of the sample and small effect sizes, results obtained in this study should be interpreted cautiously. Finally, because only partial and not full mediation was established in this study, the links among social behavior, peer representations, and social acceptance may be also influenced by other factors which were not taken into account in this study (e.g., representations of parents).

Future Directions

Given the limitations noted above, future studies need to take into account these limitations as well as the noteworthy findings from this investigation. First, in light of the points discussed thus far, a developmental approach to the study of peer representations is of great importance.

Future studies should investigate various domains of development for individuals both at the individual, dyadic, and group level (Rubin et al., 2006). Second, because it was found that aggressive behavior did not mediate the link between negative representations of peers and social acceptance, future studies should continue to differentiate between subtypes of aggression and also differentiate between likeability and perceived popularity (see Cillessen & Mayoux, 2004, for a review). Third, future work in understanding social behavior would benefit from distinguishing rejected versus neglected individuals (see Asher & Coie, 1990). Although it is important to determine the extent to which one is accepted, it is also important to consider sociometric status. For example, such consideration in methodology has shown significantly different outcomes for neglected versus rejected individuals with respect to peer relations (Asher

& Coie, 1990). Future research, therefore, should continue to investigate the cognitive and behavioral correlates of low social acceptance among peers from a developmental perspective, considering both continuity and discontinuity beginning in early childhood.

Appendix A



UNIVERSITY OF MARYLAND

INSTITUTIONAL REVIEW BOARD

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June 19, 2007

MEMORANDUM**Renewal Application Approval Notification**

To: Dr. Jude Cassidy
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Department of Psychology

From: Roslyn Edson, M.S., CIP, *RE*
IRB Manager
University of Maryland, College Park

Re: **IRB Application Number:** 00532
Project Title: "Attachments and Relationships in Adolescence"

Approval Date: June 18, 2007

Expiration Date: June 18, 2008

Type of Application: Renewal

Type of Research: Non-exempt

**Type of Review
For Application:** Expedited

The University of Maryland, College Park Institutional Review Board (IRB) approved your IRB application. The research was approved in accordance with 45 CFR 46, the Federal Policy for the Protection of Human Subjects, and the University's IRB policies and procedures. Please reference the above-cited IRB application number in any future communications with our office regarding this research.

Recruitment/Consent: For research requiring written informed consent, the IRB-approved and stamped informed consent document is enclosed. The IRB approval expiration date has been stamped on the informed consent document. Please keep copies of the consent forms used for this research for three years after the completion of the research.

Continuing Review: If you want to continue to collect data from human subjects or to analyze private, identifiable data collected from human subjects after the approval expiration date indicated above, you must submit a renewal application to the IRB Office at least 30 days before the approval expiration date.

(Continued)

Modifications: Any changes to the approved protocol must be approved by the IRB before the change is implemented, except when a change is necessary to eliminate apparent immediate hazards to the subjects. If you would like to modify the approved protocol, please submit an addendum request to the IRB Office. The instructions for submitting an addendum request are posted on the IRB website at: http://www.umresearch.umd.edu/IRB/IRb_Addendum%20Protocol.htm.

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Student Researchers: Unless otherwise requested, this IRB approval document was sent to the Principal Investigator (PI). The PI should pass on the approval document or a copy to the student researchers. This IRB approval document may be a requirement for student researchers applying for graduation. The IRB may not be able to provide copies of the approval documents if several years have passed since the date of the original approval.

Additional Information: Please contact the IRB Office at 301-405-4212 if you have any IRB-related questions or concerns.

Appendix B

Modified version of Ruldolph, Hammen, & Burge (1995) *Children's Expectations of Social Behavior Questionnaire- Peer Version* (Cassidy & Woodhouse, 1997)

CESBQ-P

Directions: Here are some short stories about you and some peers. Read each one carefully. You may not have really been in all of these situations, but just pretend that they are happening to you. For each one, circle the number that corresponds to the statement that you think best tells what the other teens might do if this really happened. Remember to read all of the choices before you choose one, and please be as honest as you can.

1. You're hanging out in the school yard and one of the older students comes up and starts to pick on you. What do you think the students in your class might do?
 1. They might just walk away so that they won't be involved.
 2. They might stick up for me and tell the older student to leave me alone.
 3. They might join in with the older student and start teasing me also.
 4. They might suggest I walk away.
2. You're thinking about running for president of your class and you ask a friend to help you make some posters to hang around the school. What do you think your friend might say?
 1. My friend might have faith that I would win and would help me make posters.
 2. My friend might say that I'd never win anyway so it's not worth it to root for me.
 3. My friend might run off to do other things of their own.
 4. My friend might say they're too busy to help me right now, but would wish me luck.
3. You're working on a group project with some other students at school and you make a suggestion for something that you could all do. What do you think they might say?
 1. They might consider everyone's suggestions before choosing an idea.
 2. They might laugh and say that it was a pretty stupid idea.
 3. They might just pretend that I didn't say anything and ignore my idea.
 4. They might say it was a good idea and try it out to see if it would work.
4. You're really excited to go to school one day because it's your birthday and you can't wait to see the other students. What do you think would happen that day in school?
 1. The other students didn't know that it was my birthday.
 2. The other students might play a mean joke on me for my birthday.
 3. The other students knew it was my birthday, but didn't think it was a big deal, so didn't say anything.
 4. The other students might say happy birthday to me, and maybe even give me cards or presents.
5. You're feeling kind of upset about something that happened one morning at home and you decide to try to talk about it with a friend. When you see your friend, you walk over and start to tell them about your problem. What do you think your friend might do?
 1. My friend might listen to my problem and try to make me feel better.

2. My friend might tell me that I always seemed to have problems and that I should stop bothering them.
 3. My friend might just ignore me and walk away.
 4. My friend might say they were headed somewhere right now, but maybe we could talk later.
6. You go to a birthday party and bring your friend a present that you picked out really carefully because you were sure the friend would like it. All the guests give their presents and then you give yours. What do you think will happen when your friend receives your present?
1. My friend might just leave it on the floor and pay attention to all the other presents.
 2. My friend might say that my present was really cool and thank me for it.
 3. My friend might pay attention to all the presents.
 4. My friend might tell me that the other people's presents were better.
7. You really like another teen in your class who you decide to ask to come over to your house to hang out after school. What do you think they might say?
1. The teen might make it clear that they didn't like me and that they didn't want to hang out with me.
 2. The teen might say that they had too many other things that they had to do.
 3. The teen might say that they would really like to come over.
 4. The teen might say that they had plans, but maybe we could get together some other time.
8. Some students at school are trying to hang a banner in the gym and they ask you to help. You help them, but when you're almost done, you drop your end and make a big mess. What do you think the other kids might do?
1. They might tell me that it was OK that I dropped my end, everyone makes mistakes.
 2. They might just ignore it and not say anything, but just start over with my help.
 3. They might ignore that you're still there and have someone else take over your end.
 4. They might yell at me and tell me that I ruined everything.
9. You see some teens playing a game during lunch one day, so you go over and ask if you can join them. What do you think they might say?
1. They might say nasty things about me and tell me to go away.
 2. They might just act like I wasn't even there and keep playing.
 3. They might tell me join in the game and make room for me.
 4. They might tell me there's no room, but that I can probably join in later.
10. The teacher yells at you in class because he thinks that he saw you passing a note to another student. You know that you really didn't pass the note. What do you think that the students sitting next to you might do?
1. They might just not say anything at all to the teacher.
 2. They might not even see what happened.
 3. They might stick up for me and tell the teacher that I didn't pass it.
 4. They might pretend that I really did pass it and get me in trouble.
11. A friend of yours promised to sleep over at your house one weekend, but then somebody else invites your friend to a party. What do you think your friend might do?

1. My friend might tell me that the sleep-over would be boring and go to the party instead.
 2. My friend might say that they were going to come over to my house anyway.
 3. My friend might go to the party for a while and then come and sleep over.
 4. My friend might pretend that they forgot about the sleep-over and go to the party.
12. You're running across the school parking lot and you trip and fall. Your knee really hurts and you bend over holding it in pain, with a really hurt look on your face. What do you think the other teens nearby would do?
1. They would come over and ask me if I was OK.
 2. They would laugh at me and call me a baby for making a big deal about being hurt.
 3. They would just ignore me.
 4. They might not have seen what happened.
13. One day a teen that you didn't know is really nice to you and acts like they want to get to know you. The next day, you see the teen with some friends and decide to join them. As you walk up, the teen's friends start to tease you. What do you think the teen might do?
1. The teen might tell them that I was pretty nice and that they should stop.
 2. The teen might pretend that we never met and act cool around the friends.
 3. The teen might join in with the group and start laughing at me too.
 4. The teen might not say anything either way.
14. You see some students playing a game and ask if you can join them. They say "yes" and you start playing, but you're having trouble remembering all the rules, so you sometimes mess up. What do you think they might do?
1. They might get annoyed and tell me I was ruining the game.
 2. They might say that I just need to practice.
 3. They might explain the rules to me again so that I could learn to play.
 4. They might just walk away and stop playing the game.
15. You have to finish a science project by the end of the week, but you still have a lot of work to do on it. You ask a friend of yours if they can help you one day after school. What do you think your friend might say?
1. My friend might say that they already had plans with other friends and didn't have time.
 2. My friend might say that it was a dumb project and that they didn't want to work on it.
 3. My friend might agree to help me out on it for a while.
 4. My friend might say yes, but then not come over.

Appendix C

Modified Version of a Peer-nomination Measure of Social Behavior (Parkhurst & Asher, 1992)

Prosocial Behavior

This person is cooperative, helpful, and does nice things.

(Please circle 1 for Yes, 2 for No,
or 3 if you don't know the person)

		Yes	No	I don't know this person
1.	SchoolID Name	1	2	3
2.	SchoolID Name	1	2	3
3.	SchoolID Name	1	2	3
4.	SchoolID Name	1	2	3
5.	SchoolID Name	1	2	3
6.	SchoolID Name	1	2	3
7.	SchoolID Name	1	2	3
8.	SchoolID Name	1	2	3
9.	SchoolID Name	1	2	3
10.	SchoolID Name	1	2	3
11.	SchoolID Name	1	2	3
12.	SchoolID Name	1	2	3
13.	SchoolID Name	1	2	3
14.	SchoolID Name	1	2	3
15.	SchoolID Name	1	2	3
16.	SchoolID Name	1	2	3
17.	SchoolID Name	1	2	3
18.	SchoolID Name	1	2	3
19.	SchoolID Name	1	2	3
20.	SchoolID Name	1	2	3
21.	SchoolID Name	1	2	3
22.	SchoolID Name	1	2	3
23.	SchoolID Name	1	2	3
24.	SchoolID Name	1	2	3
25.	SchoolID Name	1	2	3

Aggressive behavior

This person starts arguments or fights, says mean things,

And gets mad easily.

(Please circle 1 for Yes, 2 for No,
or 3 if you don't know the person)

		Yes	No	I don't know this person
1.	SchoolID Name	1	2	3
2.	SchoolID Name	1	2	3
3.	SchoolID Name	1	2	3
4.	SchoolID Name	1	2	3
5.	SchoolID Name	1	2	3
6.	SchoolID Name	1	2	3
7.	SchoolID Name	1	2	3
8.	SchoolID Name	1	2	3
9.	SchoolID Name	1	2	3
10.	SchoolID Name	1	2	3
11.	SchoolID Name	1	2	3
12.	SchoolID Name	1	2	3
13.	SchoolID Name	1	2	3
14.	SchoolID Name	1	2	3
15.	SchoolID Name	1	2	3
16.	SchoolID Name	1	2	3
17.	SchoolID Name	1	2	3
18.	SchoolID Name	1	2	3
19.	SchoolID Name	1	2	3
20.	SchoolID Name	1	2	3
21.	SchoolID Name	1	2	3
22.	SchoolID Name	1	2	3
23.	SchoolID Name	1	2	3
24.	SchoolID Name	1	2	3
25.	SchoolID Name	1	2	3

Disruptive behavior

This person is breaks the rules, does things you're not supposed to,

And gets into trouble at school.

(Please circle 1 for Yes, 2 for No,
or 3 if you don't know the person)

		Yes	No	I don't know this person
1.	SchoolID Name	1	2	3
2.	SchoolID Name	1	2	3
3.	SchoolID Name	1	2	3
4.	SchoolID Name	1	2	3
5.	SchoolID Name	1	2	3
6.	SchoolID Name	1	2	3
7.	SchoolID Name	1	2	3
8.	SchoolID Name	1	2	3
9.	SchoolID Name	1	2	3
10.	SchoolID Name	1	2	3
11.	SchoolID Name	1	2	3
12.	SchoolID Name	1	2	3
13.	SchoolID Name	1	2	3
14.	SchoolID Name	1	2	3
15.	SchoolID Name	1	2	3
16.	SchoolID Name	1	2	3
17.	SchoolID Name	1	2	3
18.	SchoolID Name	1	2	3
19.	SchoolID Name	1	2	3
20.	SchoolID Name	1	2	3
21.	SchoolID Name	1	2	3
22.	SchoolID Name	1	2	3
23.	SchoolID Name	1	2	3
24.	SchoolID Name	1	2	3
25.	SchoolID Name	1	2	3

*Shy behavior***This person is shy and hangs back.**

(Please circle 1 for Yes, 2 for No,
or 3 if you don't know the person)

		Yes	No	I don't know this person
1.	SchoolID Name	1	2	3
2.	SchoolID Name	1	2	3
3.	SchoolID Name	1	2	3
4.	SchoolID Name	1	2	3
5.	SchoolID Name	1	2	3
6.	SchoolID Name	1	2	3
7.	SchoolID Name	1	2	3
8.	SchoolID Name	1	2	3
9.	SchoolID Name	1	2	3
10.	SchoolID Name	1	2	3
11.	SchoolID Name	1	2	3
12.	SchoolID Name	1	2	3
13.	SchoolID Name	1	2	3
14.	SchoolID Name	1	2	3
15.	SchoolID Name	1	2	3
16.	SchoolID Name	1	2	3
17.	SchoolID Name	1	2	3
18.	SchoolID Name	1	2	3
19.	SchoolID Name	1	2	3
20.	SchoolID Name	1	2	3
21.	SchoolID Name	1	2	3
22.	SchoolID Name	1	2	3
23.	SchoolID Name	1	2	3
24.	SchoolID Name	1	2	3
25.	SchoolID Name	1	2	3

Appendix D

Asher and Dodge's (1986) Peer Assessment of Social Acceptance Measure

How much do you like to be in activities with this person?

(Please circle one number for each person.)

Circle DK if you don't know the person.)

[illegible]

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications, Inc.
- Ainsworth, M. S. (1989). Attachments beyond infancy. *American Psychologist*, 44, 709-716.
- Alderfer, M. A., Wiebe, D. J., & Hartmann, D. P. (2001). Social behavior and illness information interact to influence the peer acceptance of children with chronic illness. *British Journal of Health Psychology*, 6, 243-255.
- Allen, J. P., Aber, J. L., & Leadbeater, B. J. (1990). Adolescent problem behaviors: The influence of attachment and autonomy. *Psychiatric Clinics of North America*, 13, 455-467.
- Allen, J. P., Hauser, S. T., Eickholt, C., Bell, K. L. & O'Connor, T. G. (1994). Autonomy and relatedness in family interactions as predictors of expressions of negative adolescent affect. *Journal of Research on Adolescence*, 4, 535-552.
- Allen, J. P., & Land, D. (1999). Attachment in adolescence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 319-335). New York: Guilford Press.
- Asher, S. R. (1990). Recent advances in the study of peer rejection. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 3-14). New York: Cambridge University Press.
- Asher, S. R., & Coie, J. D. (1990). *Peer rejection in childhood*. New York: Cambridge University Press.
- Asher, S. R., & Dodge, K. A. (1986). Identifying children who are rejected by their peers. *Developmental Psychology*, 22, 444-449.

- Asher, S. R., Parkhurst, J. T., Hymel, S., & Williams, G. A. (1990). Peer rejection and loneliness in childhood. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 253-273). New York: Cambridge University Press.
- Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. *Journal of Consulting and Clinical Psychology*, 53, 500-505.
- Bargh, J. A., Limbardi, W. J., & Higgins, E. T. (1988). Automaticity of chronically accessible constructs in person x situation effects on person perception: It's just a matter of time. *Journal of Personality and Social Psychology*, 55, 599-605.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Berlin, L., & Cassidy, J. (1999). Relations among relationships: Contributions from attachment theory and research. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 319-335). New York: Guilford.
- Bierman, K. L. (2004). *Peer rejection: Developmental processes and intervention strategies*. New York: Guilford Press.
- Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation*. New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. London: Routledge.

- Broidy, L. M., Nagin, D. S., Tremblay, R. E., Bates, J. E., Brame, B., Dodge, K. A., et al. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology, 39*, 222-245.
- Bukowski, W. M., Newcomb, A. F., & Hartup, W. W. (Eds.). (1996). *The company they keep: Friendship in childhood and adolescence*. New York: Cambridge University Press.
- Burks, V. S., Dodge, K. A., Price, J. M., & Laird, R. D. (1999). Internal representational models of peers: Implications for the development of problematic behavior. *Developmental Psychology, 35*, 802-810.
- Caspi, A., Elder, G. H., & Bem, D. J. (1988). Moving away from the world: Life-course patterns of shy children. *Developmental Psychology, 24*, 824-831.
- Cassidy, J., & Asher, S. R. (1992). Loneliness and peer relations in young children. *Child Development, 63*, 350-365.
- Cassidy, J. & Woodhouse, S. (1997). *Children's Expectations of Social Behavior Questionnaire*. Unpublished scale, University of Maryland.
- Cillessen, A. H. N., & Mayeux, L. (2004). Sociometric status and peer group behavior: Previous findings and current directions. In J. B. Kupersmidt & K. A. Dodge (Eds.), *Children's peer relations: From development to intervention. Decade of behavior* (pp. 3-20). Washington, DC: American Psychological Association.
- Cillessen, A. H. N., & Rose, A. J. (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science, 14*, 102-105.
- Clogg, C. C., Petkova, E., & Shihadeh, E. S. (1992). Statistical methods for analyzing collapsibility in regression models. *Journal of Educational Statistics, 17*, 51-74.

- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology, 18*, 557-570.
- Coie, J. D., Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 17-59). New York: Cambridge University Press.
- Coie, J. D., & Kupersmidt, J. B. (1983). A behavioral analysis of emerging social status in boys' groups. *Child Development, 54*, 1400-1416.
- Coie, J. D., Lochman, J. E., Terry, R., & Hyman, C. (1992). Predicting early adolescent disorder from childhood aggression and peer rejection. *Journal of Consulting and Clinical Psychology, 60*, 783-792.
- Cole, D. A., Maxwell, S. E., & Martin, J. M. (1997). Reflected self-appraisals: Strength and structure of the relation of teacher, peer, and parent ratings to children's self-perceived competencies. *Journal of Educational Psychology, 89*, 55-70.
- Coplan, R. J., Gavinski-Molina, M. H., Lagace-Sequin, D. G., & Wichmann, C. (2001). When girls versus boys play alone: Nonsocial play and adjustment in kindergarten. *Developmental Psychology, 37*, 464-474.
- Coplan, R. J., Prakash, K., O'Neil, K., & Armer, M. (2004). Do you "want" to play? Distinguishing between conflicted shyness and social disinterest in early childhood. *Developmental Psychology, 40*, 244-258.
- Crick, N. R., Casas, J. F., & Mosher, M. (1997). Relational and overt aggression in preschool. *Developmental Psychology, 33*, 579-588.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74-101.

- Crick, N. R., Grotpeter, J. K., & Bigbee, M. A. (2002). Relationally and physically aggressive children's intent attributions and feelings of distress for relational and instrumental peer provocations. *Child Development, 73*, 1134-1142.
- Crick, N. R., & Ladd, G. W. (1993). Children's perceptions of their peer experiences: Attributions, loneliness, social anxiety, and social avoidance. *Developmental Psychology, 29*, 244-254.
- Crozier, W. R. (Ed.). (2000). *Shyness: Development, consolidation, and change*. New York: Routledge.
- Crozier, W. R. (2001). *Understanding shyness: Psychological perspectives*. New York: Palgrave.
- Deater-Deckard, K. (2001). Annotation: Recent research examining the role of peer relationships in the development of psychopathology. *Journal of Child Psychiatry, 42*, 565-579.
- Denham, S. A., McKinley, M., Couchoud, E. A., & Holt, R. (1990). Emotional and behavioral predictors of preschool peer ratings. *Child Development, 61*, 1145-1152.
- Diehl, D. S., Lemerise, E. A., Caverly, S. L., Ramsay, S., & Roberts, J. (1998). Peer relations and school adjustment in ungraded primary children. *Journal of Educational Psychology, 90*, 506-515.
- Dishion, T. J. (1990). The peer context of troublesome child and adolescent behavior. In P. E. Leone (Ed.), *Understanding troubled and troubling youth* (pp. 128-153). Thousand Oaks, CA: Sage Publications.

- Dishion, T. J., Patterson, G. R., Stoolmiller, M., & Skinner, M. L. (1991). Family, school, and behavioral antecedents to early adolescent involvement with antisocial peers. *Developmental Psychology*, 27, 172-180.
- Dodge, K. A. (1983). Behavioral antecedents of peer social status. *Child Development*, 54, 1386-1399.
- Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *The Minnesota Symposium on Child Psychology* (Vol. 18, pp. 77-125). Hillsdale, NJ: Erlbaum.
- Dodge, K. A., Coie, J. D., & Lynam, D. (2006). In N. Eisenberg, W. Damon, R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3, Social, emotional, and personality development* (pp. 719-788). Hoboken, NJ: John Wiley & Sons Inc.
- Dodge, K. A., & Feldman, E. (1990). Issues in social cognition and sociometric status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood. Cambridge studies in social and emotional development* (pp. 119-155). New York: Cambridge University Press.
- Dodge, K. A., Lansford, J., Burks, V. S., Bates, J. E., Pettit, G., Fonaine, R., & Price, J. (2003). Peer rejection and social information processing factors in the development of aggressive behavior problems in children. *Child Development*, 74, 374-393.
- Dodge, K. A., & Pettit, G. S. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology*, 39, 349-371.

- Dodge, K. A., Pettit, G. S., McClaskey, C. L., & Brown, M. M. (1986). Social competence in children. *Monographs of the Society for Research in Child Development, 51*, 1-85.
- Dygdon, J. A., Conger, A. J., & Keane, S. P. (1987). Children's perceptions of the behavioral correlates of social acceptance, rejection, and neglect in their peers. *Journal of Clinical Child Psychology, 16*, 2-8.
- Egan, S. K., Monson, T. C., & Perry, D. G. (1998). Social-cognitive influences on change in aggression over time. *Developmental Psychology, 34*, 996-1006.
- Eisenberg, N., & Fabes, R. A. (2006). Prosocial development. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology, 6th ed.: Vol 3. Social, emotional, and personality development* (pp. 701-778). Hoboken, NJ: John Wiley & Sons, Inc.
- Elkins, D. (1958). Some factors related to the choice-status of ninety eighth-grade children in a school society. *Genetic Psychology Monographs, 58*, 207-272.
- Elliott, D. S. (1994). Serious violent offenders: Onset, developmental course, and termination: The American society of criminology, 1993 Presidential Address. *Criminology, 32*, 1-21.
- Enger, A. (1993). Antecedents and Consequences of Shyness in Boys and Girls: A 6-year Longitudinal Study. In Rubin, K. H., & Asendorpf, J. B. (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 49-79). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Fordham, K., & Stevenson-Hinde, J. (1999). Shyness, friendship quality, and adjustment during middle childhood. *Journal of Child Psychology and Psychiatry, 40*, 757-768.

- Frederickson, N. L., & Furnham, A. F. (2004). Peer-assessed behavioral characteristics and sociometric rejection: Differences between pupils who have moderate learning difficulties and their mainstream peers. *British Journal of Educational Psychology, 74*, 391-410.
- Gazelle, H. (2006). Class climate moderates peer relation and emotional adjustment in children with an early history of anxious solitude: A child x environment model. *Developmental Psychology, 42*, 1179-1192.
- Gazelle, H., Putallaz, M., Li, Y., Grimes, C. L., Kupersmidt, J. B., & Coie, J. D. (2005). Anxious Solitude Across Contexts: Girls' Interactions with Familiar and Unfamiliar Peers. *Child Development, 76*, 227-246.
- Gifford-Smith, M. E., & Rabiner, D. L. (2004). Social information processing and children's social adjustment. In J. B. Kupersmidt & K. A. Dodge (Eds.), *Children's peer relations: From development to intervention. Decade of behavior* (pp. 61-79). Washington, DC: American Psychological Association.
- Harrist, A. W., Zaia, A.F., Bates, J.E., Dodge, K.A., & Pettit, G.S. (1997). Subtypes of social withdrawal in early childhood: Sociometric status and social-cognitive differences across four year. *Child Development, 68*, 278-294.
- Howes, C., & Aikins, J. W. (2002). Peer relations in the transition to adolescence. In R. V. Kail & H. W. Reese (Eds.), *Advances in child development and behavior, Vol. 29* (pp. 195-230). San Diego, CA: Academic Press.
- Hubbard, J. A., Dodge, K. A., Cillessen, A. H. N., Coie, J. D., & Schwartz, D. (2001). The dyadic nature of social information processing in boys' reactive and proactive aggression. *Journal of Personality and Social Psychology, 80*, 268-280.

- Huesmann, L. R. (1988). An information processing model for the development of aggression. *Aggressive Behavior*, 14, 13-24.
- Hymel, S., Bowker, A., & Woody, E. (1993). Aggressive versus withdrawn unpopular children: Variations in peer and self-perceptions in multiple domains. *Child Development*, 64, 879-896.
- Hymel, S., Rubin, K. H., Rowden, L., & LeMare, L. (1990). Children's peer relationships: Longitudinal prediction of internalizing and externalizing problems from middle to late childhood. *Child Development*, 61, 2004-2021.
- Jiang, X. L., & Cillessen, A. H. N. (2005). Stability of continuous measures of sociometric status: A meta-analysis. *Developmental Review*, 25, 1-25.
- Knitzer, J., Steinburg, Z., & Fleisch, B. (1991). Schools, children's mental health, and the advocacy challenge. *Journal of Clinical Child Psychology*, 20, 102-111.
- Kupersmidt, J. B., & DeRosier, M. E. (2004). How peer problems lead to negative outcomes: An integrative mediational model. In J. B. Kupersmidt & K. A. Dodge (Eds.), *Children's peer relations: From development to intervention. Decade of behavior* (pp. 119-138). Washington, DC: American Psychological Association.
- Ladd, G., & Burgess, K. B. (1999). Charting the relationship trajectories of aggressive, withdrawn, and aggressive/ withdrawn children during early grade school. *Child Development*, 70, 910-929.
- Ladd, G. W., & Oden, S. (1979). The relationship between peer acceptance and children's ideas about helpfulness. *Child Development*, 50, 402-408.
- Ladd, G. W., & Profilet, S. M. (1996). The Child Behavior Scale: A teacher-report measure of young children's aggressive, withdrawn, and prosocial behaviors. *Developmental Psychology*, 32, 1008-1024.

- Langois, J. H. & Stephan, C. (1977). The effects of physical attractiveness and ethnicity on children's behavioral attributions and peer preferences. *Child Development, 48*, 1694-1698.
- Lenhart, L. A., & Rabiner, D. L. (1995). An integrative approach to the study of social competence in adolescence. *Development and Psychopathology, 7*, 543-561.
- Lerner, R. M., & Lerner, J. V. (1977). Effects of age, sex, and physical attractiveness on child-peer relations, academic performance, and elementary school adjustment. *Developmental Psychology, 13*, 585-590.
- Lochman, J. E., Wayland, K. K., & White, K. J. (1993). Social goals: Relationship to adolescent adjustment and to social problem solving. *Journal of Abnormal Child Psychology, 21*, 135-151.
- MacKinnon-Lewis, C., Rabiner, D., & Starnes, R. (1999). Predicting boys' social acceptance and aggression: The role of mother-child interactions and boys' beliefs about peers. *Developmental Psychology, 35*, 632-639.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), Growing points in attachment theory and research, *Monographs of the Society for Research in Child Development, 50* (1-2, Serial No. 209), 66-106.
- McCartney, K., Bub, K. L., & Burchinal, M. (2006). Selection, detection, and reflection. *Monographs of the Society for Research in Child Development, 71*, 105-126.
- Miller-Johnson, S., Coie, J. D., Maumary-Gremaud, A., Lochman, J., & Terry, R. (1999). Relationship between childhood peer rejection and aggression and adolescent delinquency severity among African American youth. *Journal of Emotional and Behavioral Disorders, 7*, 137-146.

- Ollendick, T. H., Weist, M. D., Borden, M. C., & Greene, R. W. (1992). Sociometric status and academic, behavioral, and psychological adjustment: A five-year longitudinal study. *Journal of Consulting and Clinical Psychology, 60*, 80-87.
- Pakaslahti, L., Karjalainen, A., & Keltikangas-Jarvinen, L. (2002). Relationships between adolescent prosocial problem-solving strategies, prosocial behavior, and social acceptance. *International Journal of Behavioral Development, 26*, 137-144.
- Parke, R. D., & Ladd, G. W. (1992). *Family-peer relationships: Modes of linkage*. Hillsdale, NJ: Lawrence Erlbaum.
- Parker, J. G., & Asher, S. R. (1987). Peer acceptance and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin, 102*, 357-389.
- Parkhurst, J. T., & Asher, S. R. (1992). Peer rejection in middle school: Subgroup differences in behavior, loneliness, and interpersonal concerns. *Developmental Psychology, 28*, 231-241.
- Patterson, C. J., Kupersmidt, J. B., & Griesler, P. C. (1990). Children's perceptions of self and of relationships with others as a function of sociometric status. *Child Development, 61*, 1335-1349.
- Pettit, G. S. (1997). The developmental course of violence and aggression: Mechanisms of family and peer influence. *Psychiatric Clinics of North America, 20*, 283-299.
- Pope, A. W., Bierman, K. L., & Mumma, G. H. (1991). Aggression, hyperactivity, and inattention-immaturity: Behavior dimensions associated with peer rejection in elementary school boys. *Developmental Psychology, 27*, 663-671.
- Putallaz, M., & Gottman, J. M. (1983). An interactional model of children's entry into peer groups. *Child Development, 52*, 986-994.

- Qualter, P., & Munn, P. (2002). The separateness of social and emotional loneliness in childhood. *Journal of Child Psychology and Psychiatry*, 43, 233-244.
- Quiggle, N. L., Garber, J., Panak, W. F., & Dodge, K. A. (1992). Social information processing in aggressive and depressed children. *Child Development*, 63, 1305-1320.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, 132, 98-131.
- Rubin, K. H. (1990). Peer relationships and social skills in childhood: An international perspective. *Human Development*, 33, 221-224.
- Rubin, K. H., & Asendorpf, J. B. (Eds.). (1993). *Social withdrawal, inhibition, and shyness in childhood*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology, 6th ed.: Vol 3. Social, emotional, and personality development* (pp. 619-700). Hoboken, NJ: John Wiley & Sons, Inc.
- Rubin, K. H., Burgess, K. B., & Coplan, R. J. (2002). Social withdrawal and shyness. In P. K. Smith & C. H. Hart (Eds.), *Blackwell handbook of childhood social development* (pp. 330-352). Malden, MA: Blackwell Publishing.
- Rubin, K. H., Chen, X., & Hymel, S. (1993). Socioemotional characteristics of withdrawn and aggressive children. *Merrill-Palmer Quarterly*, 39, 518-534.
- Rubin, K. H., Chen, X., McDougall, P., Bowker, A., & Mckinnon, J. (1995). The Waterloo Longitudinal Project: Predicting adolescent internalizing and

- externalizing problems from early and mid-childhood. *Development and Psychopathology*, 7, 751-764.
- Rubin, K. H., & Coplan, R. J. (2004). Paying attention to and not neglecting social withdrawal and social isolation. *Merrill-Palmer Quarterly*, 50, 506-534.
- Rubin, K. H., Daniels-Beirness, T., & Bream, L. (1984). Social isolation and social problem solving: A longitudinal study. *Journal of Consulting and Clinical Psychology*, 52, 17-25.
- Rubin, K. H., & Krasnor, L. R. (1986). Social cognitive and social behavioral perspectives on problem solving. In M. Perlmutter (Ed.), *Minnesota Symposia on Child Psychology* (Vol.18, pp. 1-68). Hillsdale, NJ: Erlbaum.
- Ruble, D. N., Martin, C. L., & Berenbaum, S. A. (2006). Gender development. In N. Eisenberg, W. Damon, R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3, Social, emotional, and personality development* (pp. 858-932). Hoboken, NJ: John Wiley & Sons Inc.
- Rudolph, K. D., & Asher, S. R. (2000). Adaptation and maladaptation in the peer system: Developmental processes and outcomes. In A. J. Sameroff, M. Lewis, & S. M. Miller (Eds.), *Handbook of developmental psychopathology, 2nd ed.* (pp. 157-175). Hoboken, NJ: John Wiley & Sons, Inc.
- Rudolph, K. D., Hammen, C., & Burge, D. (1995). Cognitive representations of self, family, and peers in school-age children: Links with social competence and sociometric status. *Child Development*, 56, 1385-1402.
- Rydell, A., Hagekull, B., & Bohlin, G. (1997). Measurement of two social competence aspects in middle childhood. *Developmental Psychology*, 33, 824-833.

- Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls*. New York: Scribner.
- Sandstrom, M. J., & Cillessen, A. H. N. (2006). Likeable versus popular: Distinct implications for adolescent adjustment. *International Journal of Behavioral Development, 30*, 305-314.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological Methodology 1982* (pp. 290-312). Washington DC: American Sociological Association.
- Sroufe, L. A., & Fleeson, J. (1986). Attachment and the construction of relationships. In W. W. Hartup & Z. Rubin (Eds.), *Relationships and Development* (pp. 51-71). Hillsdale, NJ: Erlbaum.
- Stanhope, L., Bell, R. Q., & Parker-Cohen, N. Y. (1987). Temperament and helping behavior in preschool children. *Developmental Psychopathology, 23*, 347-353.
- Steinberg, M. S., & Dodge, K. A. (1983). Attributional bias in aggressive adolescent boys and girls. *Journal of Social & Clinical Psychology, 1*, 312-321.
- Stewart, S. L., & Rubin, K. H. (1995). The social problem-solving skills of anxious-withdrawn children. *Development and Psychopathology, 7*, 323-336.
- Stevenson-Hinde, J., & Glover, A. (1996). Shy girls and boys: A new look. *Journal of Child Psychology and Psychiatry, 37*, 181-187.
- Storch, E. A., Brassard, M. R., & Masia-Warner, C. L. (2003). The relationship of peer victimization to social anxiety and loneliness in adolescence. *Child Study Journal, 33*, 1-18.
- Underwood, M. K. (2004). Gender and peer relations: Are the two gender cultures really all that different? In J. B. Kupersmidt & K. A. Dodge (Eds.), *Children's peer*

relations: From development to intervention. Decade of behavior (pp. 21-36).

Washington, DC: America Psychological Association.

Walker, S. (2004). Teacher reports of social behavior and peer acceptance in early childhood: sex and social status differences. *Child Study Journal*, 34, 13-28.

Wentzel, K. R. (2003). Sociometric status and adjustment in middle school: A longitudinal study. *Journal of Early Adolescence*, 23, 5-28.

Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development*, 68, 1198-1209.

Wyatt, L. W., & Haskett, M. E. (2001). Aggressive and nonaggressive young adolescents' attributions of intent in teacher/student interactions. *Journal of Early Adolescence*, 21, 425-446.

Zhao, H., & Su, Y. (2005). Peer acceptance and interpretation of peer rejection in adolescence. *Chinese Mental Health Journal*, 19, 347-349.